

# PATENT ABSTRACTS OF JAPAN

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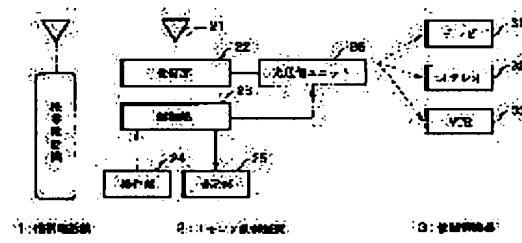
(21)Application number : 10-087672 (71)Applicant : NEC CORP  
(22)Date of filing : 31.03.1998 (72)Inventor : TORITANI SHOZO

## (54) REMOTE CONTROL SYSTEM USING PORTABLE TELEPHONE

(57) Abstract:

**PROBLEM TO BE SOLVED:** To remotely control plural appliances to be controlled by using a portable telephone set without requiring indoor wiring and a remote controller exclusively used for each appliance to be controlled by transmitting a remote control signal for remote-controlling the appliances based on a signal received from a portable telephone set.

**SOLUTION:** At the time of depressing '4' in ten keys at an operation part in order to select a remote control function, the display screen of a display part is switched to the screen for selecting a remote controlling appliance. In the case of selecting television 31, e.g. as the appliance to be remote controlled 3, '1' in the ten keys at the operation part is depressed. A control part transmits a signal corresponding to selected contents through a transmission/ reception processing part and an antenna. Then, when a signal transmitted from a portable telephone set 1 is through a radio communication line, the antenna 21 of a remote controlled transmitter 2, etc., a control part 23 light- transmits a remote control signal for turning off the power source of the television 31 from a light transmission unit 26 toward the television after analyzing the received signal to convert to a format corresponding to the television 31.



## LEGAL STATUS

[Date of request for examination] 31.03.1998

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**CLAIMS**

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**[Claim(s)]**

[Claim 1] The cellular-phone remote control system characterized by having the control means which transmits the remote control signal for receiving the signal from a portable telephone and this portable telephone, and carrying out remote control of the controlled instrument according to the received signal, and two or more controlled instruments by which remote control is carried out according to the remote control signal transmitted from this control means.

[Claim 2] Said portable telephone is a cellular-phone remote control system according to claim 1 characterized by having a display-control means for setting up the contents of control of said controlled instrument.

[Claim 3] Said control means is a cellular-phone remote control system according to claim 1 characterized by having an actuation means and carrying out optical transmission of the predetermined remote control signal by actuation of an actuation means.

[Claim 4] Said portable telephone is a cellular-phone remote control system according to claim 1 characterized by being a personal handy phone machine.

[Claim 5] Said portable telephone is a cellular-phone remote control system according to claim 1 characterized by being telephone and/or the cordless phone unit of facsimile apparatus.

[Claim 6] Said portable telephone is a cellular-phone remote control system according to claim 1 characterized by being a personal information personal digital assistant machine.

[Claim 7] Said portable telephone is a cellular-phone remote control system according to claim 1 characterized by building in said control means.

[Claim 8] The cellular-phone remote control system according to claim 1 characterized by giving said control means to said controlled instrument built-in or outside.

[Claim 9] Said controlled instrument is a cellular-phone remote control system according to claim 1 characterized by being an AV equipment and/or home electronics.

[Claim 10] Said controlled instrument is a cellular-phone remote control system according to claim 1 characterized by being an housing equipment device.

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]**

[0001]

[Field of the Invention] This invention relates to the cellular-phone remote control system which carries out remote control of an electron and the electrical machinery and apparatus using a cellular phone.

[0002]

[Description of the Prior Art] Conventionally, the approach and system which carry out remote control of an electron, the electrical machinery and apparatus, etc., such as a video tape recorder (VTR is called hereafter), and television (television is called hereafter), an air conditioner (an air-conditioner is called hereafter), using a cellular phone or personal handy phone (PHS is called a Personal Handyphone System and the following) are proposed (for example, JP,6-164747,A, JP,9-153952,A, JP,9-102827,A).

[0003]

[Problem(s) to be Solved by the Invention] In the technique indicated by the above-mentioned official report, the controlled instrument by which remote control is carried out was restricted to VTR, house wiring was required between the control unit and the controlled instrument, or the problem that the remote control unit (remote control is called below) of dedication was required was between the control unit and the controlled instrument for every controlled instrument.

[0004] This invention aims at the cellular-phone remote control system distribution which can carry out remote control of two or more controlled instruments, without requiring house wiring and the remote control only for [ each ] controlled instruments using a cellular phone.

[0005]

[Means for Solving the Problem] This invention is characterized by having the control means which transmits the remote control signal for receiving the signal from a portable telephone and a portable telephone, and carrying out remote control of the controlled instrument according to the received signal, and two or more controlled instruments by which remote control is carried out according to the remote control signal transmitted from the control means.

[0006]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained with reference to a drawing.

[0007] Drawing 1 is the block diagram showing the configuration of one example of the cellular-phone remote control system of this invention. This cellular-phone remote control system consists of a portable telephone 1, a remote control control unit 2, and two or more controlled instruments 3. The remote control control unit 2 is installed near the controlled instrument 3, and consists of an antenna 21, a receive section 22, a control section 23, a control unit 24, a display 25, and an optical transmitting unit 26. Moreover, a controlled instrument 3 consists of television 31, a stereo 32, and VTR33.

[0008] A portable telephone 1 consists of a loudspeaker 11, a microphone 12, the speech processing section 13, the transceiver processing section 14, an antenna 15, a control section 16, a display 17, a control unit 18, and a sounder 19, as shown in drawing 2.

[0009] Next, actuation of the above-mentioned example is explained. If the depression of the menu screen key of the control unit 18 of the portable telephone 1 which an operator shows first to drawing 3 is carried out, the menu selection screen shown in drawing 4 will be displayed on a display 17. If the depression of "4" of the ten key of a control unit 18 is carried out in order to choose a remote control function here, the display of a display

17 will switch to the remote control device selection screen shown in drawing 5. In choosing television 31 as a controlled instrument 3 which carries out remote control here, it carries out the depression of "1" of the ten key of a control unit 18. Then, television which the display of a display 17 shows to drawing 6 It switches to a remote control screen. In choosing for example, power-source OFF as desired actuation here, it carries out the depression of "2" of the ten key of a control unit 18. Thus, if selection of the parameter of actuation is completed, a control section 16 will transmit the signal corresponding to the contents of selection through the transceiver processing section 14 and an antenna 15.

[0010] And if the signal transmitted from the portable telephone 1 is received through the antenna 21 of a radio circuit and the remote control control unit 2, and a receive section 22, after a control section 23 analyzes the received signal and changes it into the format corresponding to the desired controlled instrument 3 31, i.e., television, from the optical transmitting unit 26, it will turn the remote control signal for turning off the power source of television 31 to television 31, and will carry out optical transmission. Consequently, the power source of television 31 becomes off. Thereby, remote control of two or more controlled instruments 3 can be carried out using a portable telephone 1, without requiring house wiring and remote control only for [ controlled instrument 3 ] each.

[0011] Moreover, if the control unit 24 of the remote control control unit 2 is operated, optical transmission of the predetermined remote control signal according to the contents of actuation will be carried out from the optical transmitting unit 26, and a controlled instrument 3 will be controlled according to the remote control signal. That is, when there is an operator near the controlled instrument 3, carrying out the direct control of the remote control control unit 2 can also carry out remote control of the controlled instrument 3.

[0012] Next, other examples are explained using the block diagram shown in drawing 7. Here, the remote control control unit 2 is considered as built-in or the configuration which carried out external every controlled instrument 3. By considering as such a configuration, the signal from a portable telephone 1 It is received through the antenna 21 of the remote control control unit 2 given built-in or outside to the controlled instrument 3 31, for example, television, and a receive section 22. After the received signal is analyzed by the control section 23 and changed into the format corresponding to the desired controlled instrument 3 31, i.e., television, a predetermined control signal is transmitted to the control circuit-ed of television 31 through a mechanical component 26, and television 31 is controlled according to the predetermined control signal. Thereby, even when each controlled instrument 3 is installed in another room, respectively, remote control of each controlled instrument 3 can be carried out with a portable telephone 1, without requiring house wiring.

[0013] In addition, in the above-mentioned example, the remote control control unit 2 is good independently also as a configuration in which some of remote control control units 2 or remote control control units 2 were made to build in a portable telephone 1. In this case, by operating the control unit 24 of the remote control control unit 2 built in the portable telephone 1, when there is an operator near the controlled instrument 3, it constitutes so that optical transmission of the remote control signal may be carried out from the optical transmitting unit 26. A controlled instrument 3 can be operated by remote control using a portable telephone 1, without requiring call origination actuation of a portable telephone 1 by this, when there is an operator near the controlled instrument 3.

[0014] Moreover, in the above-mentioned example, PHS telephone, telephone, the cordless phone unit of facsimile apparatus, or a personal information personal digital assistant machine may be used instead of a portable telephone 1.

[0015] Moreover, in the above-mentioned example, controlled instruments 3 may be the AV equipments and/or home electronics other than television 31, stereo 32, and VTR33.

[0016] Moreover, in the above-mentioned example, controlled instruments 3 may be housing equipment devices, such as a luminaire, an air-conditioner, a door, a bus, a toilet, and a shutter.

[0017]

[Effect of the Invention] As mentioned above, according to this invention, remote control of two or more controlled instruments, such as an AV equipment, home electronics, and an housing equipment device, can be carried out a remote place or near the controlled instrument with a cellular phone or PHS, without requiring house wiring and the remote control only for [ each ] controlled instruments. That is, a cellular phone and PHS can be used as common remote control of two or more controlled instruments irrespective of the distance from the installation of a controlled instrument.

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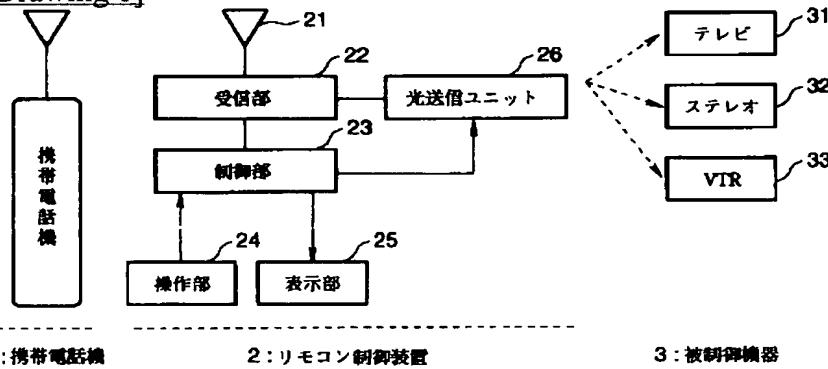
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## DRAWINGS

## [Drawing 1]

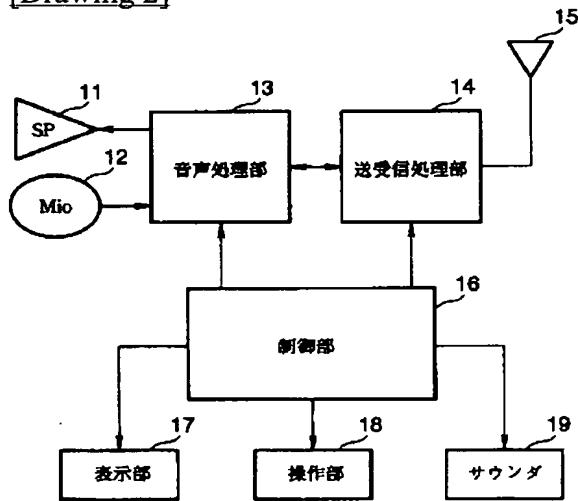


1:携帯電話機

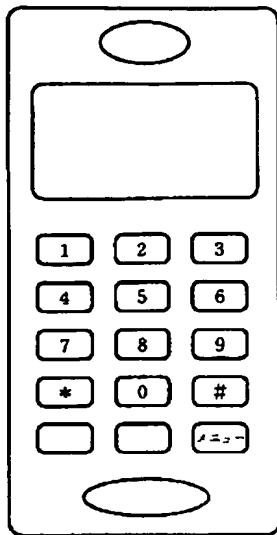
2:リモコン制御装置

3:被制御機器

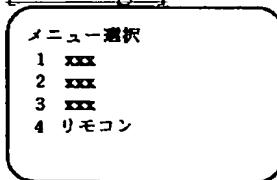
## [Drawing 2]



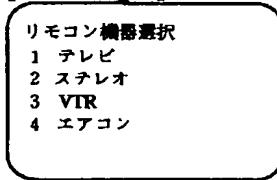
## [Drawing 3]



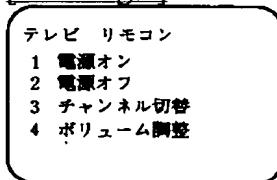
[Drawing 4]



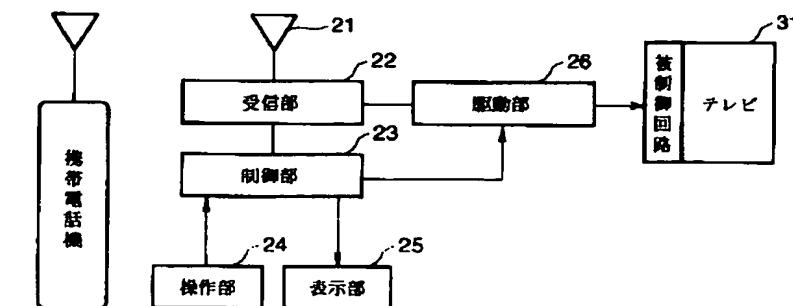
[Drawing 5]



[Drawing 6]



[Drawing 7]



1 : 携帯電話機

2 : リモコン制御装置

3 : 被制御機器

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